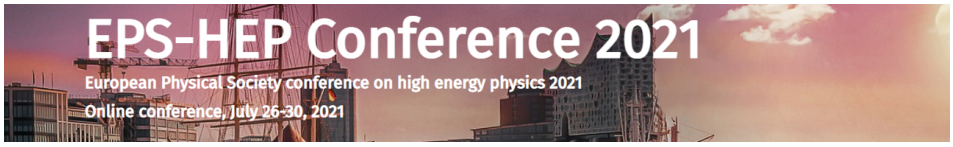

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Daya Bay Reactor neutrino flux and spectrum measurement

This poster will present the measurement on antineutrino flux and the extracted 235U and 239Pu spectra at Daya Bay Reactor Neutrino Experiment. The eight identical detectors, allocated underground in two near sites and one far sites, has operated 1958 days to measure the most precise prompt energy spectrum from six commercial nuclear reactors, each with a thermal power of 2.9GW. The uncertainty of fine-bin total spectrum is analyzed to provide help and constraints for the fine-structure study. The correlation between total and extracted prompt energy spectra is studied in detail based on error propagation.With three unfolding methods, the antineutrino spectra are obtained from both fine-bin and coarse-bin prompt energy spectra. As an alternative to other reactor flux models, a data-driven prediction on reactor antineutrino spectra is provided for other experiments with different fission fractions compared to Daya Bay.

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Collaboration / Activity

Daya Bay Collaboration

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